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A new species of *Ijuhya*, *I. oenanthicola*

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Abstract — *Ijuhya oenanthicola* sp. nov. (*Bionectriaceae*) is described and illustrated based on a collection from *Oenanthe crocata* (*Apiaceae*) in France. The *Acremonium*-like asexual state was obtained in culture.

Key words — *Ascomycota*, *Hypocreales*

Introduction

The situation of Penvenan on the North Coast of Brittany is a privileged one for both its marvellous landscapes and temperate climate. Frost is very rare in winter and summer heat is never overwhelming. Wet zones and marshes have been preserved around the mouths of rivulets, surrounded by rows of old *Salix* trees. Located between Queffioec and the "Anse de Pellinec," such a marsh has proved to be a paradise for fungal diversity. Looking for *Helotiales* on previous year plants or herbaceous stems, our attention was drawn to a tiny, hairy hypocrealean fungus on dead *Oenanthe* remnants. This collection was determined to represent a previously undescribed species. Our specimen was cultured from a single ascospore that produced an *Acremonium*-like asexual state.

Materials & methods

Specimens were examined using the methods described by Rossman et al. (1999). Microscopic observations and measurements were made in water, and the ascospore ornamentation was observed in cotton blue in lactic acid.

Taxonomy

Ijuhya oenanthicola Lechat & Hairaud, **sp. nov.** Plate 1

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Perithecia subglobosa, apice applanata, ca. 160–235 µm diam, subhyalina vel aurantia, corona subapicalis pilis agglutinatis aurantia, crasse-tunicatis, flexuosis composita, colore in KOH non mutanda. Asci ca. 51 × 9.5 µm, octospori, unitunicati. Ascosporae fusiformes, ca. 15.4 × 3.2 µm uniseptatae, striatae.

Type: France. Brittany: Côtes-d'Armor, Penvenan, Marais de Pellinec, 48°49′53.36″N 3°17′27.23″W, on dead stem of *Oenanthe crocata* L. (*Apiaceae*), 12 Mar 2011, leg. Michel Hairaud, CLL11046 (**Holotype**, LIP; ex-type culture CBS 129747).

Etymology: The epithet refers to the substratum on which this species was collected.

Perithecia scattered on stem of *Oenanthe*, superficial, subglobose, (160–) 200–220(–235) µm diam, at first white, becoming pale orange to dark orange, collapsing laterally, not changing color in 3% KOH or lactic acid, with orange, fasciculate, thick-walled hairs, agglutinated to form teeth arranged in a stellate fringe around upper margin of perithecia, teeth up to 60 µm wide at base. Hairs flexuous, thick-walled, 20–150(–165) µm long, 2–3 µm wide, rounded at tip, hyaline, smooth, cylindrical with wall 1–1.7 µm thick, aseptate. Perithecial wall 18–23 µm thick, composed of two regions: outer region 10–14 µm wide, of globose to ellipsoidal, 3.5–6 × 2–3.5 µm cells, with yellow to orange wall 1.5–2.2 µm thick; inner region 5–8 µm wide, of elongate, flattened cells 5–11 × 1.5–2 µm, with hyaline wall 0.5–1 µm thick. Asci (40–)45–55(–60) × (6–) 8–10(–12) µm (^{m} = 51 × 9.5 µm, n = 20), clavate, apices flat to rounded, without ring, containing irregularly biseriate ascospores, completely filling each ascus when 8-spored, numerous asci in which 1–3 or even 4 of 8 ascospores aborted. Ascospores (12–)14–16.5(–18) × (2.5–)3–3.5(3.8) µm (^{m} = 15.4 × 3.2 µm, n = 30), fusiform, rounded at ends, 1-septate, hyaline, striate, constricted at septum.

Anamorph: *Acremonium*-like

In Culture: After two weeks at 25°C on Difco PDA containing 5mg/L streptomycin, colony 3–3.5 cm diam, spreading a reddish brown coloration in medium, mycelium white to pale yellow, producing an Acremonium-like culture at margin of colony, composed of monophialidic conidiophores, 42–55 µm long, 3–4 µm diam with 1-septum at base, arising from smooth hyphae 2.5–3.8 µm diam, producing cylindrical to widely ellipsoidal conidia (3.5–) 4–6.5(–7) × 2–4 µm (^{m} = 6.1 × 3.2 µm, n = 30), hyaline, smooth, non-septate, with a basal abscission scar.

Key to *Ijuhya* species with fasciculate hairs

(modified from Lechat & Courtecuisse 2010)

1. Hairs 200–300 µm long; ascospores (24–)30–60(–110) × 4–7(–8) µm, striate; ascomata pale yellow ... ***I. peristomialis*** (Berk. & Broome) Rossman & Samuels

1. Hairs averaging <200 µm long **2**

2. Ascospores averaging <12 µm long **3**

2. Ascospores averaging >12 µm long **4**

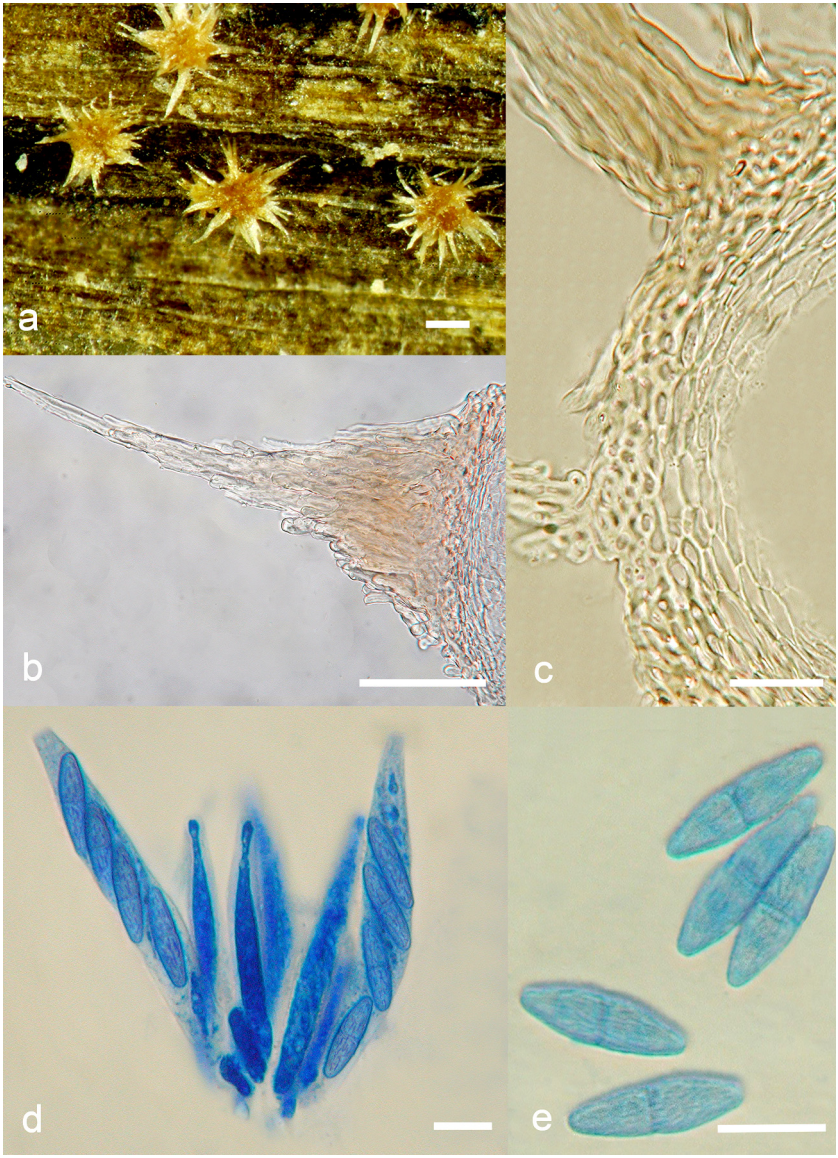

Plate 1. *Ijuhya oenanthicola* (based on holotype material). **a.** Perithecia. **b.** Fasciculate hairs. **c.** Median section of perithecial wall. **d.** Asci. **e.** Ascospores. Scale bars: a = 200 µm; b = 50 µm; c = 15 µm; d–e = 10 µm. Additional photos at http://www.ascofrance.fr.

3. Ascospores (8.5–)9.5–11.5(–12.5) × 2.8–3.2(–3.5) µm, striate;
ascomata pale yellow to brownish-orange,
hairs 28–80 × 2–2.5(–3) µm ..... ***I. equiseti-hyemalis*** Lechat & Baral

3. Ascospores 6–8(–9) × 3–4 µm, spinulose; ascomata orange-yellow,
hairs 150–200 × 3–4 µm ..... ***I. dentifera*** (Samuels) Rossman & Samuels

4. Ascospores striate,. **5**

4. Ascospores spinulose 14.5–20 × (2.5–)3–5(–5.4) µm, ascomata brownish-orange,
hairs 30–50 µm long ..... ***I. parilis*** (Syd.) Rossman & Samuels

5. Asci (4–6–)8-spored, ascospores (12–)14–16.5(–18) × (2.5–)3–3.5(3.8) µm;
hairs 20–140 µm × 2.5–3 µm, non-septate, ascomata dark orange ***I. oenanthicola***

5. Asci constantly 8-spored **6**

6. Ascospores (10.5–)11–13(–14) × 2.5–3.5 µm; ascomata dark orange,
hairs up to 160 µm long ..... ***I. antillana*** Lechat & Courtec.

6. Ascospores (19–)21–28 × 3.5–4.5µm; ascomata dull orange,
hairs up to 100 µm long ..... ***I. chilensis*** (Speg.) Rossman & Samuels

Discussion

In the genus *Ijuhya* Starbäck (*Bionectriaceae*) based on the type *I. vitrea* Starbäck, ten species were recognized by Rossman & Samuels (1999). Since then, *Ijuhya hongkongensis* J. Fröhl. & K.D. Hyde (Fröhlich & Hyde 2000), *I. hubeiensis* Y. Nong & W.Y. Zhuang (Zhuang et al. 2007), *I. equiseti-hyemalis* (Lechat & Baral 2008), and *I. antillana* (Lechat & Courtecuisse 2010) were added.

Ijuhya oenanthicola differs from other *Ijuhya* species bearing fasciculate hairs in having < 200 µm long non-septate hairs, > 14 µm long striate ascospores, numerous asci with 1–3 (or even 4) out of 8 ascospores aborted, and its occurrence on *Oenanthe crocata.*

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